

REMARKS

Claims 1, 3-7, 9-11, 13-15, and 17 are pending in this application. Claim 1 and 14 are amended and are independent.

Reconsideration of this application, as amended, is respectfully requested.

Rejections under 35 U.S.C. § 102(e)/§ 103(a)

In the Office Action dated February 10, 2003, claims 1, 3-7, 9-11, 13-15 and 17 are rejected as being unpatentable over the so-called Applicant's admitted prior art in view of JP 5-323324 to Katsuto and U.S. Patent No. 5,954,999 to Mishina et al. These rejections are respectfully traversed.

Applicant's related art teaches an LCD that includes upper and lower substrates, a liquid crystal layer between the two substrates, and upper and lower alignment layers coated on the inner surfaces of the upper and lower substrates, wherein the liquid crystal cell is heated at a temperature higher than a pneumatic, isotropic transition temperature. As discussed, a problem in the related art is that non-uniform tilt angles occur in the alignment layers, which are caused by a non-uniform temperature distribution during drying and baking, incorrectly performing a rubbing process or the injection of liquid crystal after performing the rubbing process. See the discussion at page 2, line 19, through page 3, line 20, of the present specification.

To overcome the problem in the related art, the present invention is directed to a method of manufacturing a liquid crystal display, including "heating the liquid crystal cell, wherein the heating step is performed at a temperature that is greater than about 10°C above a nematic-isotropic transition temperature to form a uniform tilt angle of the alignment layer," as recited in independent claims 1 and 14, as amended.

The Office Action concedes on page 3 that Applicant's related art fails to disclose that the heating step is performed at a temperature greater than about 10°C above a nematic-isotropic transition temperature as well as the step of quickly cooling the LCD cell. The Office Action relies on Katsuto for a teaching of an LCD element that is immediately placed flat on the surface of a rapid cooling plate to rapidly cool the LCD element from the heating temperature. Katsuto teaches that after the LCD element is heated, the LCD element is cooled within a short time. See column 5, paragraph 28. However, Katsuto does not teach or suggest the above-cited limitations of claims 1 and 14, and therefore fails to cure the deficiencies of Applicant's related art.

In rejecting claims 13 and 17, the Office Action relies on Mishina et al. for a teaching of a baking temperature of the alignment layer which can be selected from a range of from -5°C to 100°C. However, Mishina et al. discloses a reaction temperature for polymerizing the polyimide precursor, in column 4, lines 51-58,

but does not disclose "a baking temperature of the alignment layer," as recited in claims 13 and 17. Furthermore, Mishina et al. does not teach or suggest the above-cited limitation of claims 1 and 14, and therefore fails to cure the deficiencies of Applicant's related art and Katsuto.

In view of the foregoing, reconsideration and withdrawal of the rejections of the claims are respectfully requested. Independent claims 1 and 14 should be in condition for allowance. Since the remaining claims depend either directly or indirectly from allowable independent claims 1 and 14, they should also be allowable for at least the reasons set forth above, as well as for the additional limitations provided by these claims. Accordingly, all pending claims should be in condition for allowance.

Conclusion

Should there be any outstanding matters that need to be resolved in the present application, the Examiner is respectfully requested to contact Sam Bhattacharya (Reg. No. 48,107) at the telephone number of the undersigned below, to conduct an interview in an effort to expedite prosecution in connection with the present application.

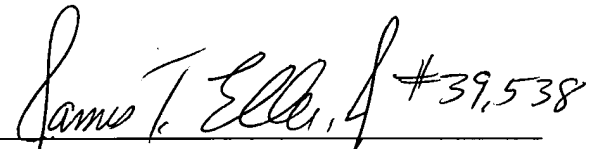

If necessary, the Commissioner is hereby authorized in this, concurrent, and future replies, to charge payment or credit any overpayment to Deposit Account No.

02-2448 for any additional fees required under 37 C.F.R. §§ 1.16 or 1.17;
particularly, extension of time fees.

Respectfully submitted,

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